is labeled has authorized or caused such product to be so labeled; and

(3) The brand or trademark of a manufacturer of such product does not appear on such label.

[75 FR 4474, Jan. 28, 2010]

§431.173 Requirements applicable to all manufacturers.

(a) *General.* A manufacturer of a HVAC and WH product may not distribute any basic model of such equipment in commerce unless the manufacturer has determined the efficiency of the basic model either from testing of the basic model or from application of an alternative efficiency determination method (AEDM) to the basic model, in accordance with the requirements of this section. In instances where a manufacturer has tested that basic model to validate an AEDM, the efficiency of that basic model must be determined and rated according to results from actual testing. (For purposes of this subpart, the "efficiency" of a commercial HVAC and WH product means the energy efficiency or energy use of that product, expressed in terms of the descriptor that referenced in section 342(a) of the Act to state the energy conservation standard for that product.)

(b) *Testing.* If a manufacturer tests a basic model pursuant to this section to determine its efficiency, the manufacturer must:

(1) Select at random the unit(s) to be tested, which must be representative of the basic model,

(2) Perform the testing in accordance with the applicable Department of Energy test procedure,

(3) Meet industry standards for the measurement accuracy of testing for the equipment being tested. This includes accuracy requirements in applicable test procedures, accuracy achieved by laboratory-grade equipment, and the accuracy of calibration standards, and

(4) Meet the requirements of either §431.174(b) or §431.175(a), whichever is applicable.

(c) *Alternative efficiency determination methods*—(1) *Criteria an AEDM must satisfy.* You may not apply an AEDM to a basic model to determine its efficiency pursuant to this subpart unless:

(i) The AEDM is derived from a mathematical model that represents the energy consumption characteristics of the basic model; and

(ii) The AEDM is based on engineering or statistical analysis, computer simulation or modeling, or other analytic evaluation of performance data.

(2) *Subsequent verification of an AEDM.* If you have used an AEDM pursuant to this subpart,

(i) You must have available for inspection by the Department records showing:

(A) The method or methods used;

(B) The mathematical model, the engineering or statistical analysis, computer simulation or modeling, and other analytic evaluation of performance data on which the AEDM is based;

(C) Complete test data, product information, and related information that you generated or acquired under paragraph (c)(1) of this section and §§431.174(c) or 431.(b)(1), as applicable; and

(D) The calculations used to determine the average efficiency and energy consumption of each basic model to which an AEDM was applied.

(ii) If requested by the Department, you must perform at least one of the following:

(A) Conduct simulations to predict the performance of particular basic models of the commercial HVAC and WH product;

(B) Provide analyses of previous simulations conducted by you;

(C) Conduct sample testing of basic models selected by the Department; or

(D) Conduct a combination of these.

(3) *Limitation on use of an AEDM.* A manufacturer may not knowingly use an AEDM to overrate the efficiency of a basic model.

§431.174 Additional requirements applicable to Voluntary Independent Certification Program participants.

(a) *Description of Voluntary Independent Certification Program participant.* For purposes of this subpart, a manufacturer that participates in a Voluntary Independent Certification Program (VICP) approved by the Department for a commercial HVAC and WH product, as described in §431.176,

and that complies with all requirements imposed by that program, is a "VICP participant" with respect to that product.

(b) *Testing.* A VICP participant that tests a basic model pursuant to this subpart must use statistically valid and accurate methods to arrive at the efficiency rating of such basic model.

(c) *Alternative efficiency determination methods.* Before using an AEDM to determine the efficiency of a basic model pursuant to this subpart, a VICP participant must apply the AEDM to one or more basic models that have been tested in accordance with §§ 431.173(b) and 431.174(b) of this subpart, and the predicted efficiency calculated for each such basic model from application of the AEDM must be within 5 percent of the efficiency determined from testing that basic model. In addition, the predicted efficiency(ies) calculated for the tested basic model(s) must on average be within one percent of the efficiency(ies) determined from testing such basic model(s).

(d) *Limitation on use of an Alternative Efficiency Determination Method.* A manufacturer may not use an AEDM to overrate the efficiency of a basic model.

§ 431.175 Additional requirements applicable to non-Voluntary Independent Certification Program participants.

If you are a manufacturer that is not a VICP participant with respect to a particular type of commercial HVAC and WH product, you must meet the following requirements as to that product.

(a) *Testing.* You must perform any testing of a basic model pursuant to this subpart under the supervision of independent testing personnel, or have such testing performed at an independent laboratory. In addition, you must test a sufficient number of units of the basic model, and the efficiency rating of the basic model must be determined, such that,

(1) Any represented value of energy efficiency is no greater than the lower of the mean of the sample, or the lower 95 percent confidence limit of the true mean divided by 0.95, and

(2) Any represented value of energy usage is no less than the greater of the mean of the sample, or the upper 95 percent confidence limit of the true mean divided by 1.05.

(b) *Alternative efficiency determination methods.* Before using an AEDM to determine the efficiency of a basic model pursuant to this subpart, you must first:

(1) Apply the AEDM to three or more basic models that have been tested in accordance with §§ 431.173(b) and 431.175(a) of this subpart. The predicted efficiency calculated for each such basic model from application of the AEDM must be within three percent of the efficiency determined from testing that basic model, and the predicted efficiencies calculated for the tested basic models must on average be within one percent of the efficiencies determined from testing such basic models; and

(2) Obtain from the Department approval of the AEDM. The Department will provide such approval after receiving from you documentation which establishes that the AEDM satisfies the requirements of §§ 431.173(c)(1) and 431.175(b)(1) of this subpart.

(3) *Validation of an AEDM.* To use an AEDM under this subpart, the manufacturer must validate it as follows:

(i) Using the AEDM, the manufacturer must calculate the efficiency of three or more of its basic models. They must be the manufacturer's highest-selling basic models to which the AEDM could apply.

(ii) The manufacturer must test each of these basic models in accordance with § 431.173(b) of this subpart, and either §§ 431.174(b) or 431.175(a), whichever is applicable.

(iii) The predicted efficiency calculated for each such basic model from application of the AEDM must be within three percent of the efficiency determined from testing that basic model, and the average of the predicted efficiencies calculated for the tested basic models must be within one percent of the average of the efficiencies determined from testing these basic models.

(4) *Limitation on use of an AEDM.* A manufacturer may not use an AEDM to overrate the efficiency of a basic model.